

## **Physical Science Unit 5 - Energy**

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Absolute Zero	The temperature at which no more energy can be removed from matter (0K or -273C)	23. <b>Joule</b>	A unit of work equal to one newton-meter
		24. Kinetic Energy	Energy of motion
2. Actual Mechanical Advantage	The ratio of the output force to the input force in a machine	25. Law of Conservation of Energy	Energy can neither be created nor destroyed; rather, it transforms from one form to another.
3. Chemical Energy	Energy stored in chemical bonds	26. <b>Lever</b>	A rigid bar that is free to move around a fixed point
4. Compound	A combination of two or more simple	27. Machine	A device that changes a force
Machine	machines that operate together	28. Mechanical Advantage	The number of times a machine increases a force exerted on it
5. Conduction	The direct transfer of heat from one substance to another substance that it is touching.	29. Mechanical Energy	Kinetic or potential energy associated with the motion or position of an object
6. Convection	The transfer of heat by the movement of a fluid	30. Nuclear Energy	The potential energy stored in the nucleus of an atom
<ul><li>7. Convection</li><li>Current</li></ul>	A current caused by the rising of heated fluid and sinking of cooled fluid	31. Output Arm	The distance between the output force and the fulcrum
8. Efficiency	The percentage of the input work that is converted to output work	32. Output Distance	The distance the output force is exerted through
9. Elastic Potential Energy	The energy of stretched or compressed objects	33. Output Force	The force exerted on an object by a machine
10. Electrical Energy	Energy caused by the movement of electrons.	34. Potential Energy	Stored energy that results from the position or shape of an object
11. Electromagnetic	A form of energy that travels through	35. <b>Power</b>	The rate at which work is done
Energy -	space as waves	36. Pulley	A simple machine that consists of a rope that fits into a groove in a wheel
12. Energy	The ability to do work	37. Radiation	Energy that is radiated or transmitted in the
<ul><li>13. Energy</li><li>Conversion</li></ul>	Changing one form of energy to another.		form of rays or waves or particles.
14. Fulcrum	The fixed point around which a lever pivots	38. Screw	An inclined plane wrapped around a cylinder
15. Gravitational Potential	Potential energy that depends on the height of an object	39. <b>Temperature</b>	A measure of the average energy of motion of the particles of a substance.
Energy		40. Thermal	A material that conducts thermal energy
16. <b>Heat</b>	The energy transferred between objects that are at different temperatures	Conductor  41. Thermal	The total energy of motion in the particles
17. Horsepower	A common unit of power, equal to about 746 watts	Energy	of a substance
18. <b>Ideal</b>	The mechanical advantage of a machine in the absence of friction	42. Thermal Expansion	An increase in the size of a substance when the temperature is increased
Mechanical Advantage		43. Thermal Insulator	A material that conducts thermal energy poorly
19. Inclined Plane	A slanted surface along which a force moves an object to a different elevation	44. <b>Watt</b>	A measure of power equal to one joule of work per second.
20. Input Arm	The distance between the input force and the fulcrum	45. <b>Wedge</b>	A V-shaped object whose sides are two inclined planes sloped toward each other
21. Input Distance	The distance the input force acts through	46. Wheel and Axle	Two different sized circular objects that are attached together and turn as one.
22. Input Force	t Force The force exerted on a machine		

47.	Work	Force x Distance	
48.	Work Input	The work done by the input force acting through the input distance	
49.	Work Output	The output force multiplied by the output distance	